CLAIMS

1. A motor drive inverter control apparatus comprising:

a rectifier circuit for rectifying an AC power supply;

an inverter circuit driven by an output from the rectifier circuit;

a motor driven by an output from the inverter circuit;

a first capacitor coupled in parallel to the output of the rectifier circuit;

a second capacitor coupled in parallel to the first capacitor via a diode;

a control power supply circuit coupled in parallel to the second capacitor; and

a control circuit, driven by the control power supply circuit, for controlling the inverter circuit,

wherein regenerative energy produced by the motor is absorbed by the first and the second capacitors.

2. The motor drive inverter control apparatus of claim 1 further comprising a discharging load coupled in parallel to the second capacitor.

3. The motor drive inverter control apparatus of claim 2, wherein the discharging load is a resistor.

4. The motor drive inverter control apparatus of claim 1, wherein the second capacitor has a capacity as much as not less than three times that of the first capacitor.

5. The motor drive inverter control apparatus of claim 1, wherein the first capacitor has a capacity that makes a ripple content of an input voltage to the inverter circuit not less than 90% during practical use of the motor.

6. The motor drive inverter control apparatus of claim 1, wherein the second capacitor is an electrolytic capacitor.

7. The motor drive inverter control apparatus of claim 1, wherein the control power supply circuit works as a discharging load for the second capacitor.

8. The motor drive inverter control apparatus of claim 1, wherein the inverter circuit is formed of six pieces of switching elements coupled together into a three-phase bridge.

9. The motor drive inverter control apparatus of claim 1 further comprising a variable load and a voltage sensor coupled in parallel to the second capacitor, wherein an output from the voltage sensor determines a value of the variable load.

10. The motor drive inverter control apparatus of claim 9, wherein the variable load is a variable resistor which selects a smaller resistance value at a greater voltage sensed by the voltage sensor.

11. The motor drive inverter control apparatus of claim 9, wherein the control circuit includes the variable load and the voltage sensor.

12. The motor drive inverter control apparatus of claim 1, wherein the motor drives a compressor of a refrigerating or an air-conditioning system such as a condenser, a decompressor and an evaporator.

13. The motor drive inverter control apparatus of claim 1, wherein the motor drives a blower which blows wind.

14. The motor drive inverter control apparatus of claim 1, wherein the motor is a brush-less DC motor.